

Comment on the proposed conservation of the specific name of *Callidea lateralis* Guérin-Méneville, 1838 (currently *Lamprocoris lateralis*; Insecta, Heteroptera) (Case 3523; see BZN 67: 213–217)

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I agree completely with the four items listed under Paragraph 9 in Case 3523. Basically, *Lamprocoris lateralis* (Guérin-Méneville, 1838) has been used in many publications, including economic ones and even popular ones; *Lamprocoris obtusus* (Westwood, 1837) has not. Moreover, *Lamprocoris lateralis* in the revised sense is widespread as an economic species, and – under that name – has been redescribed and its biology described.

I was the editor of the Tsai & Rédei (2009) paper in *Zootaxa*, and we have briefly discussed this problem before. Again, I strongly support Rédei & Tsai's arguments in Case 3523.

Comment on the proposed precedence of *Megaselia abdita* Schmitz, 1959 over *Aphiochaeta griseipennis* Santos Abreu, 1921 (currently *Megaselia griseipennis*; Diptera, PHORIDAE) (Case 3521; see BZN 67: 238–242)

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I would like to express my strong support for the request to conserve the specific name *Megaselia abdita* for the scuttle fly in question. Our laboratory is part of a small but growing research community using this species as a laboratory model for embryological studies. We are using quantitative approaches to study the processes involved in segmentation, heart and mechano-sensory bristle development in this species.

Renaming *Megaselia abdita* would lead to considerable confusion regarding the significant number of research papers already published on the subject.

Comment on the proposed precedence of *Maculinea* van Eecke, 1915 over *Phengaris* Doherty, 1891 (Lepidoptera, LYCAENIDAE)

(Case 3508; see BZN 67: 129–132)

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This comment rejects the proposal of Case 3508, requesting the Commission to use its plenary power to rule the precedence of *Maculinea* van Eecke, 1915, over *Phengaris* Doherty, 1891, in order to stabilise zoological nomenclature. We suggest that such an act would not serve this purpose but would, indeed, be likely to produce the opposite effect.

(1) *Maculinea* was synonymised with *Phengaris* by Fric et al. (2007); the very close relationship of Asiatic *Phengaris* and palaeartic *Maculinea* was shown earlier by Als et al. (2004) and Pech et al. (2004). The main purpose for the precedence of *Maculinea* over *Phengaris* is, according to Balletto et al. (BZN 67: 129–136), the prevention of nomenclatural confusion in view of the importance of *Maculinea* species; because they serve as model organisms of obligatory myrmecophily and because of the inclusion of the genus *Maculinea* in European legislature.

(2) Balletto et al. claim that the name *Maculinea* van Eecke, 1915, has been universally used for the European and Asiatic ‘Large Blue’ butterflies for almost a century and that it is involved in the ‘old and the recent scientific literature alike, as well as [in] all standard reference books on European butterflies (Higgins & Riley, 1970; Tolman & Lewington, 1997, Asher et al. 2001, etc.)’. We have to reject such a statement. We consider that the use of *Maculinea* has not been stable during the last century as claimed in Case 3508. Furthermore, two of the ‘standard reference books’ cited above are field guides and the third is a distribution atlas of British butterflies, none of these publications being of taxonomic or major scientific importance. During

the last 100 years or so we observe the use of three different generic names for the same species, subsequently placed by Fric et al. (2007) in the genus *Phengaris*. In fact the confusion in zoological nomenclature originated from the erection of the genus *Maculinea* by van Eecke (1915) in his study on West European species of the family LYCAENIDÆ. He included in the genus the following species: *Papilio alcon* [Schiffermüller, 1775], *P. euphemus* Hübner, 1800 (= *P. teleius* Bergsträsser, 1779), *P. arion* Linnaeus, 1758 and *P. arcas* Rottemburg, 1775 (= *P. nausithous* Bergsträsser, 1779), as well as *P. cyllarus* Rottemburg, 1775 (= *P. alexis* Poda, 1761) and *Polyommatus melanops* Boisduval, 1829. It is evident that van Eecke was not aware of the existence of the genus *Glaucopsyche* Scudder, 1872, nor of the genus *Phengaris* Doherty, 1891. Van Eecke also ignored a paper by Bethune-Baker (1914), who mentioned the relations of *Glaucopsyche* Scudder, 1872 (*P. alexis* was already placed in *Glaucopsyche*). It took a few decades before *Maculinea* was, by and large, accepted by lepidopterists as a genus. The exceptions were rare. Hemming (1934) noted that *Argus* Boisduval, 1832, proposed for *P. alcon*, is invalid, being a junior homonym of *Argus* Bohadsch, 1761, and thus cannot take precedence over *Maculinea*. However, a vast majority of lepidopterists assigned all species concerned to the genus *Lycaena* Fabricius, 1807, e.g. Seitz (1908–1909 and 1929–1932, apparently following Spuler, 1901–1908) and Rebel (1910). Forster (1938) treated *Maculinea* as a subgenus of *Glaucopsyche*. However, Verity (1943) and Forster & Wohlfahrt (1952–1955) treated *Maculinea* as a distinct genus. Since then, the name *Maculinea* has generally been adopted, although in some areas the use of *Lycaena* endured much longer (e.g. Bergmann, 1952; Kurentzov, 1970). Some 15 years ago Nässig (1995) synonymised *Maculinea* with *Glaucopsyche* and his treatment was used in at least some books (Hesselbarth et al., 1995; Settele et al., 2000) and papers (Pauler-Fürste et al., 1996; Pfeifer et al., 2000). Finally, Settele et al. (2009) used *Phengaris* for the European species in the new edition of their book.

(3) We do not question the importance of *Maculinea* species as model organisms for studies of the origin and evolution of parasitic interactions and of host-parasite communication channels. Nonetheless there are numerous model organisms, many of which have changed generic names as it became necessary. One famous example used by Tinbergen (Tinbergen et al., 1942) was known as *Eumenis semele* (Linnaeus, 1758) at the time, but the well established present combination is *Hipparchia semele*. An even higher-ranking example, *Rana pipiens* (Schreber, 1782), a model species used in medical, neurological, developmental and physiological studies for many years (e.g. Nilsson, 1964; Jackson & Reichlin, 1977; Ardelt et al., 2008) is now known also as *Lithobates pipiens* (i.e. Frost et al. 2006). In the similar Case 3407, the proposal of van der Linde et al. (2007) to protect the name of a much more important model organism, *Drosophila melanogaster*, was recently rejected by the Commission with an overwhelming majority vote. In that case, the authors of the proposal wanted to change the type species of the genus *Drosophila* from *D. funebris* to *D. melanogaster*. In the present Case 3508 the authors fail to provide a taxonomically feasible way to preserve the name *Maculinea*.

(4) No problems in conservation and legal protection have arisen for instance in the case of amphibians, despite extensive taxonomical changes that have recently taken place within this group (see Litvinchuk et al., 2005; Frost et al., 2006). These changes concerned such species as *Pelophylax lessonae* (Camerano, 1882) (formerly

Table 1. Google search for three different generic name combinations of *Maculinea* and *Phengaris* species. October 5, 2010.

<i>Maculinea</i>		<i>Phengaris</i>		<i>Glaucopsyche</i>	
<i>M. arion</i>	19,300	<i>P. arion</i>	6,170	<i>G. arion</i>	89,000
<i>M. arionides</i>	2,320	<i>P. arionides</i>	262	<i>G. arionides</i>	444
<i>M.alcon</i>	12,000	<i>P.alcon</i>	3,680	<i>G.alcon</i>	80,200
<i>M. rebeli</i>	7,070	<i>P. rebeli</i>	2,260	<i>G. rebeli</i>	76,400
<i>M. teleius</i>	34,000	<i>P. teleius</i>	2,270	<i>G. teleius</i>	3,650
<i>M. nausithous</i>	32,400	<i>P. nausithous</i>	569	<i>G. nausithous</i>	4,310
TOTAL	107,090		15,211		254,004
		<i>P. albida</i>	376	<i>G. albida</i>	53,200
		<i>P. atroguttata</i>	1,220	<i>G. atroguttata</i>	180
		<i>P. daitozana</i>	721	<i>G. daitozana</i>	119
TOTAL			2,317		53,499

Table 2. Google search for quoted combinations of different generic names of *Maculinea* and *Phengaris* species; i.e. for the strict binomen use. October 5, 2010.

<i>Maculinea</i>		<i>Phengaris</i>		<i>Glaucopsyche</i>	
<i>M. arion</i>	18,300	<i>P. arion</i>	4,620	<i>G. arion</i>	3,530
<i>M. arionides</i>	1,940	<i>P. arionides</i>	82	<i>G. arionides</i>	0
<i>M.alcon</i>	9,980	<i>P.alcon</i>	2,470	<i>G.alcon</i>	1,160
<i>M. rebeli</i>	5,270	<i>P. rebeli</i>	1,210	<i>G. rebeli</i>	110
<i>M. teleius</i>	31,300	<i>P. teleius</i>	1,380	<i>G. teleius</i>	1,480
<i>M. nausithous</i>	31,600	<i>P. nausithous</i>	312	<i>G. nausithous</i>	1,800
TOTAL	98,390		10,074		8,080
		<i>P. albida</i>	179	<i>G. albida</i>	0
		<i>P. atroguttata</i>	1,130	<i>G. atroguttata</i>	0
		<i>P. daitozana</i>	607	<i>G. daitozana</i>	0
TOTAL			1,916		0

Rana lessonae), *Epidalea calamita* (Laurenti, 1768) (formerly *Bufo calamita*) and *Pseudepidalea viridis* (Laurenti, 1768) (formerly *Bufo viridis*). All these species are protected by EU Habitat directive, Annex IV, as well as many other amphibians protected by law in many countries.

(5) The authors of Case 3508 used as an argument the numerical precedence of *Maculinea* over *Phengaris* in a Google search; the name *Maculinea* was used well over 30 times more often than the name *Phengaris* to designate all six species treated by them in *Maculinea*, as shown in the following table. Their argument is not representative as *Maculinea* was synonymised with *Phengaris* only three years ago. We demonstrate that there are a lower number of usages, i.e. 1,127 per year over 95 years for *Maculinea* and 5,070 over 3 years for *Phengaris* in the case of one species. This shows that *Phengaris* is being accepted by the lepidopterists' community. Furthermore, we have also checked the usage of *Glaucopsyche*. *Maculinea* was synonymised with this genus by Nässig (1995) and Google found more than 254,000 hits (Table 1). This argues against the stability of usage of *Maculinea* over almost a century. We are aware that the use of the Google search as an argument can be questioned as it can group together more species, and therefore we repeated the search with quoted names, i.e. looking strictly for binominal combinations (Table 2). Although these results were not so dramatic, they again demonstrated the acceptance

of *Phengaris* and could not confirm the stability of *Maculinea* (all but one of the species occurred in combination with three different generic names).

(6) Although it is not of any importance for the purpose of Case 3508, we note that the authors wrongly used 'Van Eecke' instead of 'van Eecke' throughout the text, as well as placing '[Sic!]' in the citation of [Denis & Schiffermüller (1775)], where the title was the correct German spelling in the 18th century.

(7) We therefore recommend rejection of these proposals, as the use of plenary power by the Commission would destabilise zoological nomenclature, and we support application of the Principle of Priority, i.e. the priority of *Phengaris* Doherty, 1891 over *Maculinea* van Eecke, 1915.

Additional references

- Ardelt, V., Shogen, K. & Darzynkiewicz, Z. 2008. Onconase and amphinase, the antitumor ribonucleases from *Rana pipiens* oocytes. *Current Pharmaceutical Biotechnology*, **9**: 215–225.
- Bergmann, A. 1952. *Die Großschmetterlinge Mitteldeutschlands. Band 2 Tagfalter*. 493 pp. Urania-Verlag GmbH, Jena.
- Bethune-Baker, G.T. 1914. Synonymic notes on the Ruralidae. *The Entomologists Records*, **26**: 159–164.
- Forster, W. 1938. Das System der palaearktischen Polyommataini. *Mitteilungen der Münchener Entomologischen Gesellschaft*, **28**: 97–118.
- Forster, W. & Wohlfahrt, T.A. 1952–55. *Die Schmetterlinge Mitteleuropas. Band 2: Tagfalter*. 180 pp. Franckh'sche Verlagshandlung Stuttgart.
- Frost, D.R., Grant, T., Faivovich, J., Bain, R.H., Haas, A., Haddad, C.F.B., De Sá, R.O., Channing, A., Wilkinson, M., Donnellan, S.C., Raxworthy, C.J., Campbell, J.A., Blotto, B.L., Moler, P., Drewes, R.C., Nussbaum, R.A., Lynch, J.D., Green, D.M. & Wheeler, W.C. 2006. The Amphibian Tree of Life. *Bulletin of the American Museum of Natural History*, **297**: 1–370.
- Hemming, A.F. 1931. Revision of the genus *Iolana*, Bethune-Baker (Lepidoptera, Lycaenidae). *Transactions of the Entomological Society of London*, **79**: 323–333.
- Hemming, F. 1934. *The generic names of the Holarctic butterflies. Vol. 1. 1758–1863*. viii, 184 pp. British Museum (Natural History), London.
- Hesselbarth, G., van Oorschot, H. & Wagener, S. 1995. *Die Tagfalter der Türkei unter Berücksichtigung der angrenzenden Länder*. 1354, 847 pp. Selbstverlag Sigbert Wagener, Bocholt.
- Jackson, I.M. & Reichlin, S. 1977. Thyrotropin-releasing hormone: abundance in the skin of the frog, *Rana pipiens*. *Science*, **198**: 414–415.
- Kudrna, O. & Belicek, J. 2005. On the „Wiener Verzeichnis“, its authorship and the butterflies named therein. *Oedippus*, **23**: 1–32.
- Kurentsov, A.I. 1970. *Bulavousye Cheshuekrylye Dalnego Vostoka SSSR: opredelitel. [Butterflies of Far East of USSR: a key]*. 163 pp. Nauka, Leningrad.
- Litvinchuk, S.N., Zuiderwijk, A., Borkin, L.J. & Rosanov, J.M. 2005. Taxonomic status of *Triturus vittatus* (Amphibia: Salamandridae) in western Turkey: trunk vertebrae count, genome size and allozyme data. *Amphibia-Reptilia*, **26**: 305–323.
- Nässig, W. 1995. Die Tagfalter der Bundesrepublik Deutschland: Vorschlag für ein modernes, phylogenetisch orientiertes Artenverzeichnis (kommentierte Checkliste). *Entomologische Nachrichten und Berichte*, **39**: 1–28.
- Nilsson, S.E. 1964. Interreceptor contacts in the retina of the frog (*Rana pipiens*). *Journal of Ultrastructure Research*, **11**: 147–165.
- Pauler-Fürste, R., Kaule, G. & Settele, J. 1996. Aspects of the population vulnerability of the large blue butterfly, *Glaucopsyche (Maculinea) arion*, in south-west Germany. Pp. 275–281 in Settele, J., Margules, C., Poschlod, P. & Henle, K. (Eds.), *Species Survival in Fragmented Landscapes*. Kluwer, Dordrecht.

- Pfeifer, M.A., Andrick, U.R., Frey, W. & Settele, J. 2000. On the ethology and ecology of a small and isolated population of the Dusky Large Blue Butterfly *Glaucopsyche (Maculinea) nausithous* (Bergsträsser, 1779) (Lep., Lycaenidae). *Nota Lepidopterologica*, **23**: 147–172.
- Rebel, H. 1910. *Fr. Berges' Schmetterlingsbuch...* (9th edition). 507, 114 pp., 53 pls. Schweitzerbartsche Verlagsbuchhandlung, Stuttgart.
- Scudder, S.G. 1872. A systematic revision of some of the American butterflies; with brief notes on these known to occur in Essex County, Mass. *Fourth Annual Report of the Trustees of the Peabody Academy of Science for the year 1871*, 24–83.
- Seitz, A. (Ed.). 1907–1909. Die palaearktischen Tagfalter. *Die Gross-Schmetterling der Erde*, **1**: 1–379.
- Seitz, A. (Ed.). 1929–1932. Die palaearktischen Tagfalter. Supplement. *Die Gross-Schmetterling der Erde*, **1**(Suppl.): 1–399.
- Settele, J., Feldmann, R. & Reinhardt, R. 2000. *Die Tagfalter Deutschlands*. 452 pp. Ulmer, Stuttgart.
- Settele, J., Steiner, R., Reinhardt, R., Feldmann, R. & Hermann, G. 2009. *Schmetterlinge – Die Tagfalter Deutschlands* (2. Aufl.). 256 pp. Verlag Eugen Ulmer, Stuttgart.
- Spuler, A. 1901–1908. *Die Schmetterlinge Europas*. Teil 1. 127, 385 pp. Schweitzerbartsche Verlagbuchhandlung, Stuttgart.
- Tinbergen, N., Meeuse, B.J.D., Boererema, L.K. & Varossieu, W.W. 1942. Die Balz de Samtfalters, *Eumensis* (=Satyrus) *semele* (L.). *Zeitschrift für Tierpsychologie*, **5**: 182–226.
- van der Linde, K., Bächli, G., Toda, M.J., Zhang, W.-X., Hu, Y.-G. & Spicer, G.S. 2007. *Drosophila* Fallén, 1823 (Insecta, Diptera): proposed conservation of usage. *Bulletin of Zoological Nomenclature*, **64**: 238–242.

Comments on the proposed conservation of usage of *Testudo gigantea* Schweigger, 1812 (currently *Geochelone (Aldabrachelys) gigantea*; Reptilia, Testudines)

(Case 3463; see BZN **66**: 34–50, 80–87, 169–186, 274–290, 352–357; **67**: 71–90, 170–178, 246–254)

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1. Summary

Case 3463 promotes nomenclatural stability and universality through conservation of the oldest, most frequently cited, most widely recognised name for the Aldabra tortoise, *Testudo gigantea* Schweigger, 1812, with a neotype fixed to Aldabra Atoll. It opposes nomenclatural confusion sustained by inconsistent, contradictory nomenclatural proposals causing incessant debates, and proposes the suppression of *Testudo dussumieri* Gray, 1831, a name resurrected after more than a century of disuse and tied to a lectotype of uncertain provenance and taxonomy, unsuitable as the name-bearing type for the Aldabra tortoise. Case 3463 does not pretend to resolve taxonomic questions or bear on generic names, other than to make *Aldabrachelys* Loveridge & Williams, 1957 – established explicitly for the Aldabra tortoise – available for this taxon. Case 3463 does not debate the veracity of the holotype of *T. gigantea*, disqualify certain professions from nomenclatural discussions, or restrict nomenclatural issues to the exclusive domain of an elite group. It seeks multidisciplinary relevance and widespread valuing of the Commission and its Code, especially in collaboration with specialists in conservation biology.

2. BZN documents specific to Case 3463

To date the Bulletin of Zoological Nomenclature (BZN) has carried Case 3463 (BZN 66: 34–50) and subsequent comments published in 7 sequential issues: 66(1) (pp. 80–87; 17 comments, all supporting); 66(2) (pp. 169–186; 16 supporting (including a comment with 17 signatures), 3 opposing); 66(3) (pp. 274–290; 30 supporting, 1 opposing); 66(4) (pp. 352–357; 3 supporting, 1 opposing), 67(1) (pp. 71–90; 5 supporting, 4 opposing, including 4 authors who each wrote 2 or 3 opposing comments); 67(2) (pp. 170–178; 6 supporting, 1 opposing); 67(3) (pp. 246–254; 1 supporting), totalling 88 comments, 78 supporting and 10 opposing.

3. Derivation of Case 3463

Case 3463 was submitted after the neotype designation to stabilise the binomen *T. gigantea* Schweigger, 1812 (Frazier, 2006) was closely followed by a report of rediscovery of the long lost holotype, thereby invalidating the neotype (Bour, 2006).

4. Justification for Case 3463

Widespread, increasing nomenclatural instability generates intense confusion which retards research, conservation, and management, as well as discrediting taxonomic sciences; and this creates an urgent need to stabilise the name of the Aldabra tortoise. A profusion of specific, generic, and binomial names have been applied to one distinctive taxon – the Aldabra tortoise (BZN 66: 39–40 para. 22); two thirds of the 49 synonyms of *T. gigantea* were established after 1981 (Fritz & Havaš, 2007, pp. 265–267). More than one binomen has been used for this taxon in the same book, in the same chapter, and even on the same page of peer-reviewed scientific publications (e.g. Jacobson, 2007, p. 597; Miller & Dinkelacker, 2007, pp. 232, 242, 249, 260; Paré & Jacobson, 2007, pp. 534, 563–565; Stirk et al., 2007, pp. 171, 206, 208, 216; BZN 66: 43 para. 28), disproving the claim of Dubois et al. (BZN 67: 83–84) that publication of Case 3463 caused nomenclatural confusion. Proponents for replacing *gigantea* have acknowledged that their acts ‘... run counter to an apparently satisfying system’ (Bour, 1984b, p. 281) and ‘... invalidation of the familiar epithet *gigantea* represents a rather profound upheaval’ (Pritchard, 1986, p. 531). The vast majority of Case 3463 comments describe high levels of nomenclatural confusion, even ‘chaos’.

5. The prevailing name for the Aldabra tortoise

The name *gigantea* has been attached to the Aldabra tortoise since 1881, recognised as the oldest name for this taxon since 1897, and identified as the senior synonym in authoritative taxonomic reviews since 1909 (BZN 66: 37 paras 10–11). Of the most common species names (*dussumieri*, *elephantina*, and *gigantea*), *gigantea* is by far the most frequent – often by an order of magnitude. Lawrence et al. (BZN 67: 249) performed detailed evaluations of internet sites specialised for publications, and they reported that, out of a total of 1435 publication records available, 1144 (80%) used *gigantea* for the Aldabra tortoise while only 163 used *dussumieri*. These results contradict what Bour et al. (BZN 67: 76) claimed based on their numbers from general ‘Google’ searches, a procedure that is unreliable for evaluating relative frequencies of names in publications (BZN 67: 250). Furthermore *gigantea* prevails

despite internet searches being biased against older publications which have not been digitised; *gigantea* has been in use from 1812 to the present; *dussumieri* was used rarely between 1831 and 1870, not used for over a century between 1871 and 1983, and resurrected in 1984 (Frazier & Matyot, 2010). Moreover, a majority of publications that use *dussumieri* are authored by one person, J. Gerlach. Most taxonomists, administrators, biologists, conservationists, ecologists, educators, and systematists, from dozens of institutions and countries, recognise *gigantea* as the correct name – that used in scientific and popular publications, legal documents, treaties, and other official papers. All but one of over a score of commentators (including the Minister of Environment) from the Republic of Seychelles – where the taxon is endemic – regard *gigantea* as the accustomed and correct name (BZN 66: 80–87, 176–184, 274–283, 285–290, 352–354, 356–357; BZN 67: 71, 78, 81, 90, 170–177, 178; see supplement deposited with Commission Secretariat for more details). Opponents to Case 3463, who have promoted one and then another alternative name, have admitted that *gigantea* is the most widely recognised and established name: ‘... from the beginning of the 20th century, the valid name for the Aldabra tortoise seemed to have been definitely settled, and the binomina *Testudo gigantea* or *Geochelone gigantea*, with Schweigger as the author, have been widely used until today’ (Bour, 2006, p. 15; see also Bour, 1984a, p. 162, 1984b, p. 281; Bour & Pritchard BZN 66: 171); ‘... there was a period of active publication on Aldabra during the 1960s and 1970s when *gigantea* was used almost exclusively ...’ (Cheke, BZN 66: 174–175); and ‘... *gigantea* has indeed been the name in commonest use for the Aldabra tortoises in the 20th century ...’ (Pritchard, 1986, p. 531). Opponents have contradicted themselves, with claims based on selected binomina that produce results supporting their arguments (e.g. BZN 66: 185). Opponents misrepresent the Case, confounding ‘prevailing name’ with ‘stable nomenclature’ (BZN 66: 173; 185; BZN 67: 77; 84–85): Case 3463 does not intimate stability in the use of *T. gigantea*, a situation that would make the petition redundant.

6. The holotype of *T. gigantea* Schweigger, 1812

After the original 1812 description of *T. gigantea*, the holotype (by monotypy) was never again mentioned, even by A.M.C. Duméril who supervised Schweigger’s work; by 1915 it was regarded as lost (BZN 66: 37 para. 12). Bour (2006) reported having rediscovered Schweigger’s holotype shortly after a neotype designation (Frazier, 2006). Notwithstanding, many commentators, including those experienced in the management of museum collections, are not convinced of the rediscovery (BZN 66: 80; 82; 86; 87; 177; 182; 183; 275; 277; 280; 285; 286; 288; BZN 67: 78; 90; 173). Support for the rediscovery is based on the opinions of those who oppose Case 3463, e.g. ‘... see no reason to doubt that specimen MNHN 9554 is Schweigger’s holotype ...’ (BZN 66: 174); ‘... Bour (2006) describes a specimen which corresponds extremely closely to the type. His account of this specimen leaves no reasonable doubt that it is indeed the type of *Testudo gigantea*.’ (BZN 66: 184); ‘Thus, I think these minor differences can not be used to invalidate the rediscovery of the holotype of *Testudo gigantea*.’ (BZN 66: 255). Hence, confirmation of the holotype is open to interpretation – either one believes it or one does not – so debates about the status of the holotype will continue to rage, as shown in recent comments (BZN 67: 74; 84). Opponents complained that supporters of Case 3463 have not studied MNHN 9554,

the purported holotype (BZN 66: 170; BZN 67: 74; 85), and they presented detailed discussions about Articles 75.3.4, 75.3.5, 75.3.6 (BZN 66: 355 incorrectly referred to as Article 76.3.6; BZN 67: 75; 86). However, they misconstrue Case 3463; it is not about the validity of the holotype, its measurements, type locality etc., and such discussions are a diversion from the central point. Case 3463 rests on Article 75.8, to set aside all previous type material, independent of what it is, where it was collected, who discovered it, or other details debated by the opponents (see Article 75.6 for similar situations: ‘When an author discovers that the existing name-bearing type of a nominal species-group taxon is not in taxonomic accord with the prevailing usage of names and stability or universality is threatened thereby, he or she should maintain prevailing usage [Art. 82] and request the Commission to set aside under its plenary power [Art. 81] the existing name-bearing type and designate a neotype.’). Widespread uncertainty and disagreement about the rediscovery claim promote endless debate and nomenclatural instability, further justifying invoking Article 75.8. As Vences (BZN 66: 282) concluded, ‘Considering the disagreements in the past, it is unlikely that the scientific community will reach a consensus on which name to use without an unambiguous decision of the Commission – and such a consensus is badly needed to make discussions on the evolution, ecology and conservation of these fascinating creatures available to a wide audience’.

7. The lectotype of *T. dussumieri* Gray, 1831

Frazier & Matyot (2010) provide a detailed evaluation of *T. dussumieri* and its lectotype; some critical points follow. Bour (1984a, p. 171 footnote 1) fixed RMNH 3231 as the lectotype of *T. dussumieri* Gray, 1831, (Article 74.5 of the Code), and later (2006, p. 22), in an invalid subsequent lectotype designation, declared that it should be used as the name-bearing type for the Aldabra tortoise. Basic problems in nomenclature and taxonomy negate this proposal. There is no convincing evidence that the lectotype is from Aldabra; historic research suggests that it is from Mahé, granitic Seychelles – the locality is uncertain. Given the probable locality and date of collection the specimen could be a taxon distinct from the Aldabra tortoise. RMNH 3231 is thus not a suitable name-bearing type for the Aldabra tortoise, and continued use of the binomen will further complicate nomenclatural and taxonomic discussions.

8. The neotype of *T. gigantea* Schweigger, 1812

The neotype is from Aldabra Atoll, and its validation (by invoking Articles 75.8 and 76.3) would conserve the prevailing species name, make available the genus-group name (*Aldabrachelys*) established explicitly for this taxon, and comply fully with critical parts of the Code, namely, (a) the Preamble: ‘The objects of the Code are to promote stability and universality in the scientific names of animals and to ensure that the name of each taxon is unique and distinct. All its provisions and recommendations are subservient to those ends . . .’; (b) Article 23.2: ‘Purpose. In accordance with the objects of the Code (see Preamble), the Principle of Priority is to be used to promote stability and it is not intended to be used to upset a long-accepted name in its accustomed meaning by the introduction of a name that is its senior synonym . . .’; and (c) definition of ‘neotype’: ‘The single specimen designated as the name-bearing type of a nominal species or subspecies when there is a need to define

the nominal taxon objectively and no name-bearing type is believed to be extant. If stability and universality are threatened, because an existing name-bearing type is either taxonomically inadequate or not in accord with the prevailing usage of a name, the Commission may use its plenary power to set aside that type and designate a neotype.' The neotype of the Aldabra tortoise champions the vision that 'the work of nomenclature aims for stability in names' (Pyle & Michel, 2009, p. 41; see also Pauly et al., 2009, p. 117).

9. Unfamiliar alternate names

Alternate names for the Aldabra tortoise are unfamiliar to a wide audience, and their use often includes an explanation that the taxon is the same as *gigantea*, the accustomed name (BZN 66: 40 paragraph 23). An opponent to Case 3463 wrote 'It was perhaps unfortunate that *dussumieri* was revived . . .' (Cheke, BZN 66: 175). The overwhelming support for conserving *gigantea*, led a second proponent of alternative names to accede ' . . . although I and some others have argued for the use of *dussumieri* and *Dipsochelys*, most commentary to the ICZN to date has supported the use of *gigantea* and *Aldabrachelys* . . . Therefore, as an editorial compromise for this species account in this monograph series, the Aldabra giant tortoise is here provisionally referred to *gigantea* rather than *dussumieri*, and Arnold's giant tortoise to the genus *Aldabrachelys* rather than *Dipsochelys*.' (Gerlach, 2009, p. 028.3).

10. Contradictory and conflicting proposals and unfounded claims

Nomenclatural confusion stems from contradictory and conflicting proposals as well as unfounded claims related to changing both the specific and generic names; e.g. several opposing commentators have actively promoted first one and then another alternate name for the Aldabra tortoise. There are too many contradictory, unfounded claims used to oppose Case 3463 to be listed herein, but four recent contradictions warrant mention.

(i) Bour (1982, p. 117) claimed that Schweigger's (1812) description of *T. gigantea* – which included 'Brasilia' as the locality – referred 'unquestionably' to *Cylindraspis indica* (Schneider, 1783), an extinct species endemic to La Réunion, Mascarene Islands; he maintained this position for 2 decades and then changed (Bour, 2006) arguing that Schweigger's description referred to *Chelonoidis denticulata* (Linnaeus, 1766), a South American species. During this period he claimed that the valid name for the Aldabra tortoise was *T. elephantina* Duméril & Bibron, 1835. This allegation was despite the fact that he recognised that (a) *T. gigantea* was the established name for the Aldabra tortoise, and (b) *T. dussumieri* Gray, 1831, was an older name than *T. elephantina* (e.g. Bour, 1984a, 1984b, 1985, 1988, 1994). In 2003 Bour began using *T. dussumieri* for the Aldabra tortoise (Gerlach & Bour, 2003; Bour, 2006). Recently Bour (2009) adopted a contradictory position in a comparable situation regarding the importance of prevailing names and commented that, although Linnaeus' (1758) description of *Testudo orbicularis* was based on a specimen of *Mauremys leprosa* (Schoepff, 1812), 'I do not wish to run counter to the stability of nomenclature' (for details see Havaš, BZN 67: 171).

(ii) Dubois (2010) openly opposed parts of the Code, but he conceded that prevailing use could be accepted if his criteria were met. He insisted (p. 268) that the

name should be (a) ‘...in general use in the non-specialized literature, i.e. in publications that do not deal with systematics, taxonomy or phylogeny’: (b) in ‘permanent paper publications’; (c) ‘signed by authors from a significant number of different countries who did not publish together on the taxa at stake’; (d) in ‘publications that appeared prior to public discussion of the case’; and that (e) ‘more importance should be given to books than to papers in periodicals’; and (f) ‘only its use in the titles of publications’. Case 3463 easily qualifies with all of Dubois’ criteria, but he recently led a passionate comment to oppose the conservation of the prevailing use of *T. gigantea* (BZN 67: 82–89).

(iii) Hoogmoed (BZN 66: 354–356) opined that Case 3463 is unnecessary but, earlier in a similar situation, Hoogmoed & Crumly (1984: 255) invoked Article 73(c) (i) of the Code (1964) to designate a lectotype of *Psammobates geometrica* (Linnaeus, 1758), after it was discovered that Linnaeus’ (1758) description of *Testudo geometrica* applied to a specimen of *Geochelone elegans* (Schoepff, 1795). Hoogmoed & Crumly took this measure ‘... in order to conserve current usage and prevent nomenclatural chaos’ (for details see Havaš (BZN 67: 170–174).

(iv) Pritchard (1986) presented lengthy arguments for using *Aldabrachelys elephantina* for the Aldabra tortoise, then co-authored 3 impassioned comments in the BZN claiming that *Dipsochelys dussumieri* was the valid name (BZN 66: 169–174; 67: 72–74, 74–77). However, most recently he used *D. elephantina* for this animal (Pritchard, 2010, p. 42), employing a third binomial combination.

11. Pros and cons of conserving *Testudo gigantea* Schweigger, 1812 for the Aldabra tortoise

Accepting Case 3463 would: (a) fix the name-bearing type to a specimen from Aldabra; (b) calm interminable debates and contradicting proposals for the name of a distinctive taxon that is of great and wide ranging interest to taxonomists, conservationists, and many other disciplines; (c) conform with the needs of diverse fields, including conservation and international accords; and (d) conform with all aspects of the Code, particularly its purpose and spirit. Case 3463 shuns the ‘kind of pedantic legalism that exposes taxonomists to ridicule by other biologists’ (Williams & Bowman, 1994, p. 224) and seeks relevance among a wide, diverse body of users (Pauly et al., 2009, p. 117–118, 126). Rejecting Case 3463 would: (a) give the Principle of Priority complete dominance to other aspects of the Code, overwriting such parts as the Preamble and Article 23.2 (definition of purpose); (b) promote a name-bearing type of uncertain provenance and identity; (c) foster continued, intense debates (e.g. provenance and identity of the lectotype of *T. dussumieri*; veracity of the holotype discovery, etc.); and (d) protect an elitist view of the Code. Regardless, generic names would not be affected, other than the availability of *Aldabrachelys* for the Aldabra tortoise, and no taxonomic issue would be directly resolved (Pyle & Michel, 2008).

12. Conclusions

The nomenclature of the Aldabra tortoise has been unacceptably – and unnecessarily – unstable and confused for over a decade, resulting in what many people of different disciplines call ‘nomenclatural chaos’. Speculations involving ‘shards of certainty’ about historic interpretations (often resulting in self contradictions) have been argued

to pay strict, mechanical, obedience to the Principle of Priority, but the central principle of the Code would be undermined by not recognising the prevailing name and the clear needs of a diverse community, including – but not limited to – taxonomists. Maintaining the neotype of *T. gigantea* Schweigger, 1812, and suppressing *T. dussumieri* Gray, 1831, provides the simplest, most widely acceptable, least disruptive means to promote lasting nomenclatural stability for a distinctive taxon – and its close allies – that will support the needs of a diverse community and respect the spirit and priority of the Code. Not a single thing is learned about the animal in question by changing its name. Renaming the Aldabra tortoise as *dussumieri* will not solve problems for the future: there will be interminable debates about the lectotype as well as about the veracity of the holotype of *gigantea* and other details relating to these specimens and related taxa, with the tone dropping to personal attacks and defences. Hence, nothing is lost by employing Article 75.8 and fixing the nomenclatural mess so that various professions – including taxonomy – can get on with research and conservation activities.

Additional references

- Bour, R.** 1985. Les tortues terrestres géantes des îles de l’océan Indien occidental: données géographiques, taxinomiques et phylogénétiques. In de Broin, F. & Jiménez-Fuentes, E. (Eds.), *Comunicaciones del I Simposium Internacional sobre Quelonios Fósiles, París, Octubre, 1983. Studia Geologica Salmanticensia, Volumen Especial 1 (Studia Palaeocheloniologica I)* [1984], pp. 17–76.
- Bour, R.** 1988. Tortues et insularité: les tortues des Seychelles. *Bulletin de la Société Zoologique de France*, **112** [1987]: 401–418.
- Bour, R.** 2009. The European pond turtle *Emys orbicularis* in North Africa. Pp. 160–162 in Rogner, M., *European pond turtle – Emys orbicularis*. Chelonian Library, Edition Chimaira, Frankfurt am Main.
- Dubois, A.** 2010. Zoological nomenclature in the century of extinctions: priority vs. ‘usage.’ *Organisms Diversity & Evolution*, **10**: 259–274. DOI 10.1007/s13127-010-0021-3.
- Frazier, J. & Matyot, P.** 2010. On the identity of Monsieur Dussumier’s Dutch tortoise and the identity of the lectotype of *Testudo dussumieri* Gray, 1831. *Zootaxa*, **2665**: 29–50.
- Fritz, U. & Havaš, P.** 2007. Checklist of chelonians of the world. *Vertebrate Zoology*, **57**: 149–368. <http://www.vertebrate-zoology.de/> (Accessed on 6 November, 2010).
- Gerlach, J.** 2009. *Aldabrachelys arnoldi* (Bour 1982) – Arnold’s giant tortoise. In Rhodin, A.G.J., Pritchard, P.C.H., van Dijk, P.P., Saumure, R.A., Buhlmann, K.A., Iverson, J.B. & Mittermeier, R.A. (Eds.), *Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group*. Chelonian Research Monographs, **5**: 028.1–028.5, <http://www.iucn-tftsg.org/aldabrachdys-arnoldi-0281> (Accessed on 29 October 2010).
- Hoogmoed, M.S. & Crumly, C.R.** 1984. Land tortoise types in the Rijksmuseum van Natuurlijke Historie with comments on nomenclature and systematic (Reptilia: Testudines: Testudinidae). *Zoologische Mededelingen*, **58**(15): 241–259.
- Paré, J.A. & Jacobson, E.R.** 2007. Mycotic diseases of reptiles. Pp. 461–526 in Jacobson, E.R. (Ed.), *Infectious Diseases and Pathology of Reptiles: Color Atlas and Text*. CRC Press/Taylor & Francis; Boca Raton, Florida/New York.
- Pauly, G.B., Hillis, D.M. & Cannatella, D.C.** 2009. Taxonomic freedom and the role of official lists of species names. *Herpetologica*, **65**(2): 115–128.
- Pritchard, P.C.H.** 2010. Madagascar: Island continent of tortoises great and small. P. 42 in *Program Abstracts, 8th Annual Symposium on the Conservation and Biology of Tortoises and Freshwater Turtles*. Orlando, Florida.
- Pyle, R.L. & Michel, E.** 2008. ZooBank: Developing a nomenclatural tool for unifying 250 years of biological information. *Zootaxa*, **1950**: 39–50.

- Strik, N.I., Alleman, A.R. & Harr, K.E.** 2007. Circulatory inflammatory cells. Pp. 167–218 in Jacobson, E.R. (Ed.), *Infectious Diseases and Pathology of Reptiles: Color Atlas and Text*. CRC Press/Taylor & Francis; Boca Raton, Florida/New York.
- Williams, E.H. & Bowman, T.E.** 1994. Case 2915. *Lironeca* Leach, 1818 (Crustacea, Isopoda): proposed conservation as the correct original spelling. *Bulletin of Zoological Nomenclature*, **51**(3): 224–225.

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As Chair of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group of the International Union for Conservation of Nature and its Species Survival Commission, senior editor of the monograph series *Conservation Biology of Freshwater Turtles and Tortoises* and senior contributor on its Turtle Taxonomy Working Group checklist of turtles of the world (TTWG 2009), in which we provisionally listed both of the proposed names for the Aldabra tortoise while waiting for an ICZN Commission decision, as well as being a previous proponent of the designation of *gigantea* as the conserved name for the Aldabra tortoise (BZN 66: 86), I now urge the Commission to make a rapid and definitive determination on the outcome of this all-too-long and needlessly confrontational debate concerning the name for the Aldabra tortoise. Whereas I count most of the commentators on Case 3463 as personal friends and valued and respected professional colleagues – whether they are for or against the conservation of *gigantea* as the valid name for Aldabran tortoises, I now petition the Commission to end this increasingly repetitive debate and to make a decision without further external input, which would only serve to further divide our international turtle conservation and taxonomy community. The cogent arguments presented by many commentators on the case, as well as Frazier in both his original petition (BZN 66: 34) and final summary above, argue convincingly for the conservation of *gigantea* as the name to be used for the Aldabra tortoise. In addition, the name *gigantea* has been used consistently for the Aldabra tortoise by the two

foremost global conservation-focused species checklists: the IUCN Red List of Threatened Species™ and the Convention on International Trade in Endangered Species of Fauna and Flora (CITES). I urge the Commission to act in the best interests of both nomenclatural stability and conservation of the species and to not allow this controversial quagmire to continue – let us instead move forward and refocus our conservation efforts to protect and preserve this iconic species, and to refer to it by its most widely accepted and historically most unequivocally recognised species name – *gigantea*.

Additional references

Turtle Taxonomy Working Group [Rhodin, A.G.J., Parham, J.F., van Dijk, P.P. and Iverson, J.B.] 2009. Turtles of the world: annotated checklist of taxonomy and synonymy, 2009 update, with conservation status summary. In Rhodin, A.G.J., Pritchard, P.C.H., van Dijk, P.P., Saumure, R.A., Buhlmann, K.A., Iverson, J.B. and Mittermeier, R.A. (Eds.), *Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group*. Chelonian Research Monographs No. 5, pp. 000.39–000.84, doi:10.3854/crm.5.000.checklist.v2.2009, <http://www.iucn-tftsg.org/cbftt/>.

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I am writing in opposition to the application by Frazier to designate a neotype for *Testudo gigantea*.

Hubrecht (1881, p. 43) was the first author to list the type locality of *T. gigantea* as Aldabra. However, this argument has never been justified, and recent rediscovery of the type specimen (MNHN 9554) by Bour (2006) demonstrates that *T. gigantea* is based on a specimen of *Chelonoidis denticulata*. The name *Testudo gigantea* should remain attached to the holotype (MNHN 9554) and the names *Testudo dussumieri* and *Dipsochelys* should be used for the Aldabra tortoise. Additionally, Hubrecht downplayed the validity of the type locality of *T. gigantea* as Brazil.

As Bour et al. (BZN 67: 76) have demonstrated, there is no agreement on which name should be used for the Aldabra tortoise.

Comment on the proposed conservation of usage of *Allosaurus* Marsh, 1877 (Dinosauria, Theropoda) by designation of a neotype for its type species *Allosaurus fragilis* Marsh, 1877

(Case 3506; see BZN 67: 53–56; 178, 255–256)

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Here are several points of Case 3506 that need clarification:

1. *Hypsirophus discurus* Cope, 1878 (mis-spelled as *Hypsirophis discursis* in BZN 67: 54) is a stegosaur and not an allosaur (Maidment et al., 2008). The type specimen, AMNH 5731, actually consists of a dorsal vertebra, two caudal neural arches, and two caudal centra (Galton, 2010).

2. Marsh (1877) actually listed the type specimen of *Allosaurus fragilis* (YPM 1930) as consisting of two centra (one dorsal and one caudal) and a phalanx, but Madsen (1976) found a tooth and a humerus in YPM 1930 while Mickey Mortimer's website, (<http://home.comcast.net/~eoraptor/Carnosauria.htm#Allosaurusfragilis>) lists the *A. fragilis* type specimen as consisting of a tooth, an incomplete cervical or anterior dorsal centrum, an incomplete posterior dorsal centrum, a posterior dorsal centrum, two dorsal rib fragments, a humeral fragment, and a pedal phalanx III-1.

3. Paul and Carpenter do not mention that *Camptonotus amplus* (holotype YPM 1879) has also been considered a synonym of *Allosaurus fragilis* by Bakker (1998). However, because YPM 1879 consists of a foot only *Camptonotus amplus* qualifies as a nomen dubium.

4. Paul (1988) referred AMNH 666 to *Creosaurus atrox* and used that specimen to distinguish *C. atrox* from *A. fragilis*. However, referral of AMNH 666 to *Creosaurus atrox* awaits the publication of Chure's (2000) thesis. Chure (2000) finds DINO 11541 to be distinct from *Allosaurus fragilis*.

5. If the suggestions of Paul & Carpenter regarding the taxonomy of *Allosaurus* are confirmed by the publication of Chure's (2000) thesis, then *Allosaurus fragilis* will be restricted to USNM 4734 and YPM 1930.

Additional references

- Bakker, R.T.** 1998. Dinosaur Mid-Life Crisis: The Jurassic-Cretaceous Transition in Wyoming and Colorado. Pp. 67–77 in Lucas, S.G., Kirkland, J.I. & Estep, J.W. (Eds.), Lower and Middle Cretaceous Terrestrial Ecosystems. *New Mexico Museum of Natural History and Science Bulletin*, 14.
- Chure, D.J.** (2000). *A new species of Allosaurus from the Morrison Formation of Dinosaur National Monument (Utah–Colorado) and a revision of the theropod family Allosauridae*. Unpublished Ph.D. dissertation. Columbia University.
- Galton, P.M.** 2010. Species of plated dinosaur *Stegosaurus* (Morrison Formation, Late Jurassic) of western USA: new type species designation needed. *Swiss Journal of Geosciences*, 103(2): 187–198.
- Madsen, J.H., Jr.** 1976. *Allosaurus fragilis*: A Revised Osteology. *Bulletin / Utah Geological Survey*, (2)109: 1–163.
- Maidment, S.C.R., Norman, D.B., Barrett, P.M. & Upchurch, P.** 2008. Systematics and phylogeny of Stegosauria (Dinosauria: Ornithischia). *Journal of Systematic Palaeontology*, 6(4): 367–407.

Comment on the proposed conservation of usage of *Mastodon waringi* Holland, 1920 (currently *Haplomastodon waringi*; Mammalia, Proboscidea) by designation of a neotype

(Case 3480; see BZN 66: 164–167, 358–359; 67: 96; 181–182)

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Regarding *Mastodon chimborazi*, Pasenko (BZN 67: 96) overlooked the statement by Ferretti (BZN 66: 358–359) that the holotype of *M. chimborazi* was not completely destroyed in a fire.

The type material of *M. waringi* is from Pedra Vermelha, Brazil, whereas the holotype of *M. chimborazi* and MECN 82, 83, 84, 133 (designated as the neotype of *M. chimborazi* by Ficarelli et al., 1995) were collected from Ecuador (Ficarelli et al., 1995). Lucas selects a specimen from a locality different from the type locality of *M. waringi*, and his action does not fully comply with Article 75.3.6 of the Code (i.e. that evidence should be given that a neotype came as nearly as practicable from the same locality as the holotype).

Given the data above, I urge the Commission to reject the proposals in Case 3480.

Additional references

Ficarelli, G., Borselli, V., Herrera, G., Moreno Espinosa, M. & Torre, D. 1995. Taxonomic remarks on the South American mastodons referred to *Haplomastodon* and *Cuvieronius*. *Geobios*, 28: 745–756.